REMARKS

Claims 1-6 and 8-17 are all the claims pending in the application. Claim 1 has been amended to incorporate the subject matter of claim 7, which has been canceled, and support for the further amendments can be found, for example, on page 21, lines 22-26 and page 22, lines 2-10 of the specification.

Entry of the above amendments is respectfully requested.

I. Preliminary Matters

Initially, the Examiner is respectfully requested to indicate that the drawings submitted on April 9, 2004 have been accepted.

II. Response to Rejection of Claims 1-17 under 35 U.S.C. § 112, second paragraph

Claims 1-17 are rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite.

Specifically, The Examiner asserts that claim 1 recites "using" and it is unclear how the smoking liquid is being used. In addition, the Examiner asserts that claim 1 does not recite any positive steps.

Without acquiescing the merits of the rejection, claim 1 has been amended to recite the steps of introducing, removing, brining into contact and applying.

Regarding claim 7, the Examiner asserts that it is unclear where normal pressure or pressurized conditions are contemplated and requests clarification.

Without acquiescing the merits of the rejection, claim 7 has been canceled and claim 1 has been amended to recite "or" instead of "and/or".

In view of the above, it is respectfully submitted that the rejection has been overcome, and withdrawal of the rejection is respectfully requested.

III. Response to Rejection of Claim 1 under 35 U.S.C. § 101

Claim 1 is rejected under 35 U.S.C. §101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. §101.

Without acquiescing the merits of the rejection, claim 1 has been amended to recite the steps of introducing, removing, bringing into contact, and applying.

Thus, it is respectfully submitted that the rejection has been obviated by the amendment, and withdrawal of the rejection is respectfully requested.

IV. Response to Rejection of Claims 1-17 under 35 U.S.C. § 103(a)

Claims 1 and 2 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Smits (4,359,481).

In addition, claims 3-17 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Smits, and further in view of Sakurai (JP 10-179016; JP '016).

Applicants respectfully traverse the rejection.

Amended claim 1 is directed to a fish processing method comprising introducing a smoking material into a smoke generating device, into which no air is introduced from a cast portion for feeding the smoke material and smoke discharge path, removing at least one unnecessary substance selected from the group consisting of soot and tar from the smoking material under a condition where air is interrupted or air is not introduced, bringing, at a normal pressure or a pressurized condition, the smoking material into contact or into mixing contact by a mixer with at least one of water, a solution or a solution comprising at least one additive selected from the group consisting of an antioxidant, a pH adjuster and a condiment to dissolve a smoke dry component to form a smoking liquid , and applying the smoking liquid to a fish to produce a smoke dried product.

According to the present invention, a smoke material generated from the smoke generating apparatus, in which no air is introduced from the cast portion from which the smoke material is fed and the smoke discharge path, is used. As a result, it is possible to obtain a smoking material containing a very small amount of oxide, having a weak scent and a refreshing smell, and stabilizing coloration of coloring matter of the product, i.e., the color does not change for long period of time. In addition, unnecessary substance such as soot or tar is removed from the smoking material under a condition where an air is interrupted or an air is not introduced, so that a high qualitative smoking material containing a small amount of oxidants and from which impurities being removed is obtained.

Then, the smoking material from which an unnecessary substance is removed is brought into contact at a normal pressure or a pressurized condition or into mixing contact by a mixer with one of a water, a solution and a solution into which at least one necessary additive consisting of an antioxidant, a pH adjuster and a condiment is dissolved. Thus, it is possible to obtain a smoking liquid in which smoking components is dissolved (liquidized), i.e., gaseous smoking component is not remained in those liquid. Accordingly, in the present invention, a smoking liquid in which high qualitative smoking component is dissolved can be obtained.

The high qualitative smoking liquid is applied to a skinless cut fillet, for example, by dipping the fillet in the smoking liquid or by dispersing the liquid into fish meat through a blood vessel so that a smoke dried product is produced. As a result, the same effect as that in case of smoke dry process is exhibited in preservation or the like.

In addition, according to the present invention, it is possible to perform a smoke dry process which has been conventionally difficult to handle and has a disadvantage in mass production by using a smoking liquid which is easy to handle and a process that is superior in mass production.

It is respectfully submitted that Smits does not teach or suggest the claimed process, and that one of ordinary skill in the art would not combine the technologies of producing "smoking material" of Smits and "perfusion liquid" by JP '016 to arrive at the present invention.

Smits does not disclose that a smoke dry component is dissolved in the smoking liquid. In addition, Smits does not disclose the use of a smoke generating device, into which no air is introduced from a cast portion for feeding the smoke material and smoke discharge path. In contrast, in the present invention, it is possible to suppress a mixture of air so that the smoking material generated in the smoke generating device is prevented from being diluted. A high qualitative gaseous component is obtained from the smoking material so that a smoking liquid high in qualitative smoking component is dissolved.

Furthermore, Smits does not disclose that the smoking material from which an unnecessary substance is removed is brought into contact at a normal pressure or a pressurized condition or into mixing contact by a mixer with, for example, water. There is no mention of the conditions under which the smoking material and water are mixed.

Thus, Smits does not render the present invention obvious since it does not teach or suggest every element of claim 1, as required under §103.

Furthermore, the Abstract of JP '016 does not make up for the deficiencies of Smits.

The Abstract of JP '016 relates to perfusion by which the blood of edible animal meat can be efficiently and surely discharged, and thus, does not relate to a smoking liquid. Thus, one of ordinary skill in the art would not be motivated to combine the references to arrive at the claimed invention since JP '016 does not relate to a smoking liquid.

Moreover, the Abstract of JP '016 does not disclose that a smoke dry component is dissolved in the smoking liquid, does not disclose the use of a smoke generating device, into which no air is introduced from a cast portion for feeding the smoke material and smoke

discharge path, and does not disclose that the smoking material from which an unnecessary substance is removed is brought into contact at a normal pressure or a pressurized condition or into mixing contact by a mixer with, for example, water. Thus, even if the references were somehow combined, the combination would not result in the present invention.

In addition, if bubbles larger than a diameter of fine blood vessel are generated, the bubble causes a blockade of the fine blood vessel and the smoking material as well as a perfusate cannot pass the vessel. For example, a diameter of a fine flood vessel of fish is 10 μm through which cells contained in blood can barely pass. Therefore, a diameter of bubbles which pass through the fine flood vessel must be less than 10 μm. It is very difficult to produce a number of such fine bubbles precisely. Additionally, if a diameter of even one bubble is larger than 10 μm, it would clog the fine blood vessel so that a smoke dry process cannot be carried out.

In this respect, according to the present invention, a smoking component is dissolved to produce a smoking liquid containing no bubbles (gas). Accordingly, if a smoking liquid is dispersed in fish body as a perfusate through blood vessel, it is possible to prevent the blood vessel from being clogged by bubbles. The inventors found that in cases where a smoking liquid containing a small number of bubble is used to perform a perfusion process, the perfusion stops in several to several ten seconds so that a perfusion process cannot be continued. For this reason, in the present invention, a smoking liquid in which a liquid smoking component is dissolved, is used, not a gaseous smoking component. Thus, the present invention solves such problem completely.

Accordingly, it is respectfully submitted that the excellent effects of the present invention could not be obtained from the cited art.

For the above reasons, it is respectfully submitted that a *prima facie* case of obviousness has not been established, and that claims 1-6 and 8-17 are patentable over the cited art.

In view of the above, withdrawal of the rejection is respectfully requested.

V. Response to Rejection of Claims 8-17 under 35 U.S.C. § 112, first paragraph

Claims 8-17 are rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement.

The Examiner asserts that the claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Specifically, the Examiner asserts that the anti-coagulant used in the process is not adequately identified in the specification or claims.

Applicants respectfully traverse the rejection.

To satisfy the written description requirement, a patent specification must describe the claimed invention in sufficient detail so that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention. *See* MPEP § 2163. The usual manner in which an Applicant can show possession of the claimed invention is by describing the claimed invention with all of its limitations using descriptive means such as words, structures, figures, diagrams and formulas that fully set forth the claimed invention.

It is respectfully submitted that anti-coagulates that prevent blood from coagulating are well known in the art and one of ordinary skill in the art would recognize that such anti-coagulants could be used in the claimed invention such that one skilled in the art could reasonably conclude that the inventor had possession of the claimed invention.

A technique completely to remove blood from meat such as fish and meat of cattle is important and influences a product's quality. If there occurs a coagulation of blood and

thrombosis during a removal of blood, a perfusion would be insufficient to make a discharge of blood remarkably be obstructed. Therefore, it is necessary to suppress an occurrence of thrombosis by preventing blood from coagulating. Accordingly, for the purpose of pulling out blood from meat, an "anti-coagulant" is generally used for preventing blood from coagulating and known in the art. For example, in marine product processing industry, citric acid Na for preventing blood from coagulating due to a chelate bond to calcium ion contained in blood is used as an anti-coagulants adopted in a blood inspection sample.

In fish processing industry relating to the present invention, there exists many additives permitted to be adopted to blood and having an effect of anti-coagulant of blood, which is used as anti-coagulant. Many antioxidants available in the market are also additives having such effect. As an anti-coagulant to be used in the present invention, for example, a mixed antioxidant consisting of citric acid Na as base material and L-ascorbic acid is used. In that case, it an be expected that an anti-coagulative effect by citric acid, an antioxidant effect due to a synergy with L-ascorbic acid, and an ability of buffering pH are obtained.

In addition, various other anti-coagulants can be used in the present invention. Any such anti-coagulants are generally used and known in the fish processing industry, and one of skill would recognize that such anti-coagulants can be used in the present invention.

In view of the above, withdrawal of the rejection is respectfully requested.

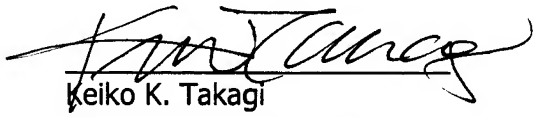
VI. Conclusion

For the foregoing reasons, reconsideration and allowance of claims 1-6 and 8-17 is respectfully requested.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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